

# Schottky Barrier Diode

## Features

1. High reliability
2. Very low forward voltage
3. Small surface mounting type

## Applications

Applications where a very low forward voltage is required

## Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

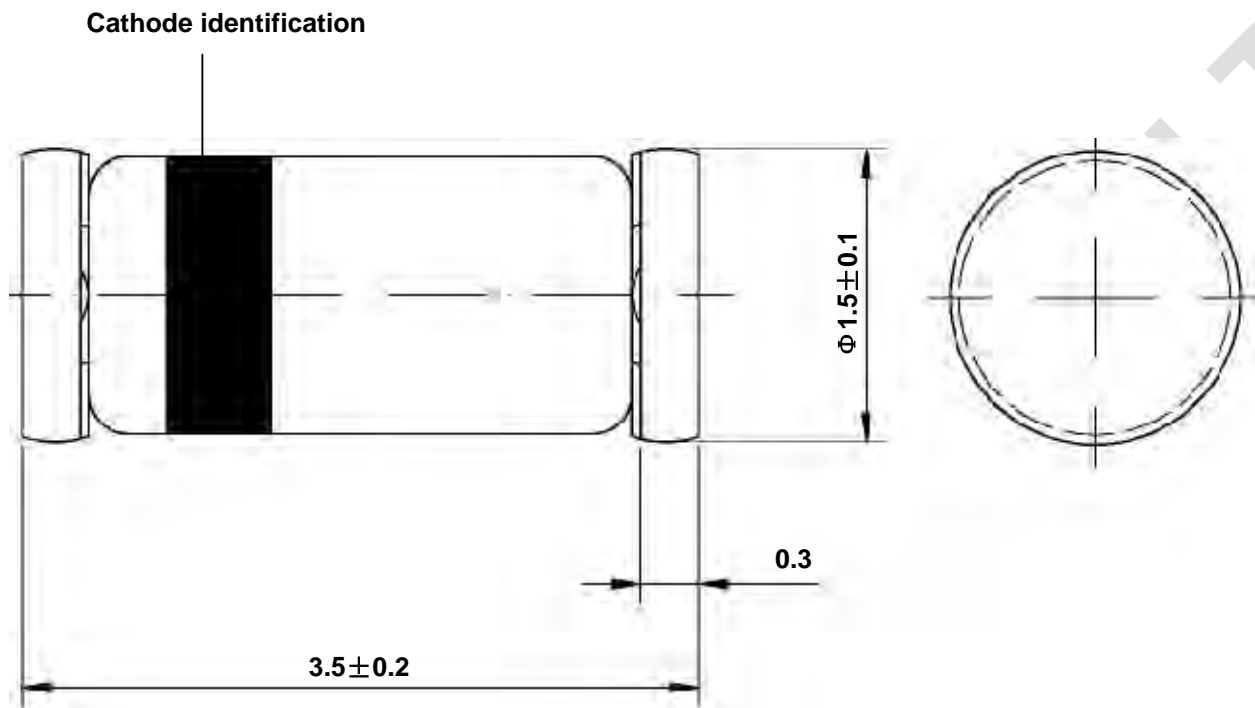
Parameter	Test Conditions	Symbol	Value	Unit
Repetitive peak reverse voltage		$V_{RRM}$	40	V
Forward continuous current	$T_{amb}=25^{\circ}\text{C}$	$I_F$	350	mA
Repetitive peak forward current	$T_{amb}=25^{\circ}\text{C}$ , $t_p \leq 1\text{ s}$	$I_{FRM}$	1	A
Surge forward current	$t_p \leq 10\text{ms}$ , $T_{amb}=25^{\circ}\text{C}$	$I_{FSM}$	7.5	A
Power dissipation	$T_{amb}=65^{\circ}\text{C}$	$P_{tot}$	330	mW
Maximum junction temperature		$T_j$	125	$^{\circ}\text{C}$
Ambient operating temperature range		$T_A$	-65~+125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65~+150	$^{\circ}\text{C}$

## Maximum Thermal Resistance

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	$R_{thJA}$	300	$^{\circ}\text{C}/\text{W}$

## Dimensions in mm



Glass Case  
Mini Melf / SOD 80  
JEDEC DO 213 AA

## Characteristics ( $T_j=25^\circ\text{C}$ unless otherwise specified)

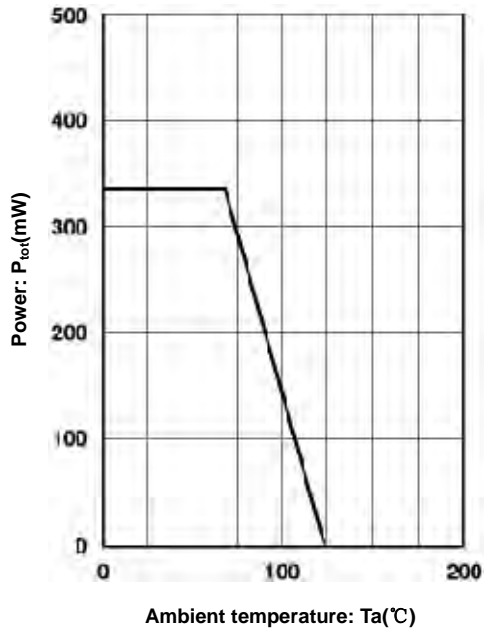


Figure 1. Admissible power dissipation vs. ambient temperature

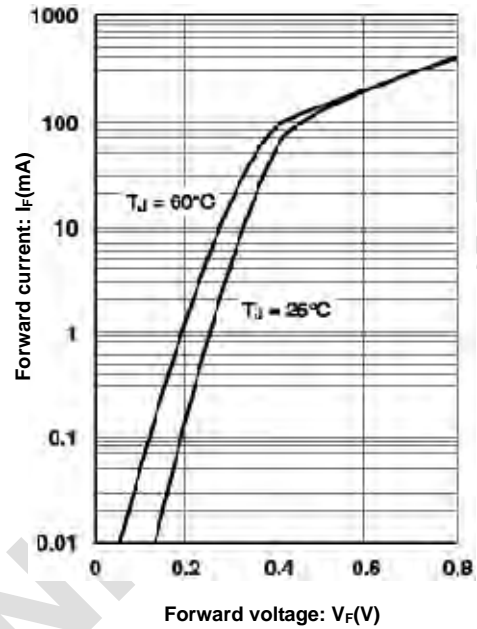


Figure 2. Forward characteristics

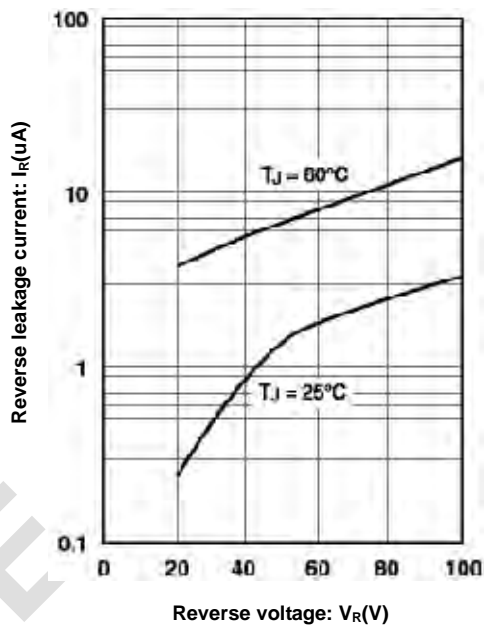


Figure 3. Typical reverse characteristics

## Electrical Characteristics

T<sub>j</sub>=25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =10 μ A (pulsed)	40	-	-	V
Leakage Current Pulse test tp<300 μ s, δ <2%	I <sub>R</sub>	V <sub>R</sub> =10V	-	-	2	μ A
		V <sub>R</sub> =10V, T <sub>j</sub> =60°C	-	-	15	μ A
		V <sub>R</sub> =20V	-	-	5	μ A
		V <sub>R</sub> =20V, T <sub>j</sub> =60°C	-	-	25	μ A
		V <sub>R</sub> =40V	-	-	25	μ A
		V <sub>R</sub> =40V, T <sub>j</sub> =60°C	-	-	50	μ A
Forward voltage Pulse test tp<300 μ s, δ <2%	V <sub>F</sub>	I <sub>F</sub> =0.1mA	-	-	0.25	V
		I <sub>F</sub> =1mA	-	-	0.30	V
		I <sub>F</sub> =10mA	-	-	0.40	V
		I <sub>F</sub> =50mA	-	-	0.50	V
		I <sub>F</sub> =200mA	-	-	0.75	V
		I <sub>F</sub> =500mA	-	-	0.90	V
Capacitance	C <sub>tot</sub>	V <sub>R</sub> =1V, f=1MHz	-	12	-	pF